

Title (en)  
BIOMARKERS FOR THE PROGRESSION OF ALZHEIMER'S DISEASE

Title (de)  
BIOMARKER FÜR DAS FORTSCHREITEN VON MORBUS ALZHEIMER

Title (fr)  
BIOMARQUEURS POUR LA PROGRESSION DE LA MALADIE D'ALZHEIMER

Publication  
**EP 2035582 A2 20090318 (EN)**

Application  
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Abstract (en)  
[origin: WO2007149798A2] The genetic polymorphism LRRK2 (leucine-rich repeat kinase 2)-T1602S is significantly associated with conversion from mild cognitive impairment (MCI) to Alzheimer's disease (AD), with the patients with TT genotype being at greater risk to progress to Alzheimer's disease. The LRRK2-T2352 also showed a trend for conversion to Alzheimer's disease, with the patients with CC genotype tending to progress to Alzheimer's disease. Similar to the APOE-E4 allele, in the presence of a BuChE-K variant, LRRK2-T1602S and LRRK2-T2352 showed a greater association with the rate of conversion from mild cognitive impairment to Alzheimer's disease. In another study with placebo-treated Alzheimer's disease patients, LRRK2-T1602S and LRRK2-T2352 showed a same trend of association. The Alzheimer's disease patients with TT genotype of LRRK2-T1602S or CC genotype of LRRK2-T2352 tended to decline faster on cognitive performance over 6 months, especially in the presence of a BuChE-K variant. The association between the two common LRRK2 polymorphisms and Alzheimer's disease progression shows that LRRK2 may play a role in Alzheimer's disease pathogenesis, especially disease progression, and that polymorphisms of LRRK2 can be used as biomarkers of this progression.

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